

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051 Phone: (860) 827-2935 Fax: (860) 827-2950 E-Mail: siting.council@po.state.ct.us Web Site: www.state.ct.us/csc/index.htm

June 4, 2002

Christopher B. Fisher, Esq. Cuddy & Feder & Worby LLP 90 Maple Avenue White Plains, NY 10601-5196

RE: EM-AT&T-004-020521 - AT&T Wireless notice of intent to modify an existing telecommunications facility located at 10 Redwood Lane, Avon, Connecticut.

Dear Attorney Fisher

At a public meeting held on June 3, 2002, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice received May 21, 2002. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

Thank you for your attention and cooperation.

Very truly yours

William on A Calab

Chairman

MAG/DM/laf

c: Honorable Richard W. Hines, Chairman Town Council, Town of Avon Steven V. Kushner, Town Planner, Town of Avon Philip K. Schenck, Jr., Town Manager, Town of Avon Sheila R. Becker, SBA, Inc. Stephen J. Humes, Esq., LeBoeuf, Lamb, Greene & MacRae

NOTICE OF INTENT TO MODIFY AN **EXISTING TELECOMMUNICATIONS FACILITY AT** 10 REDWOOD LANE, AVON, CONNECTICUT

Pursuant to the Public Utility Environmental Standards Act, Connecticut General Statutes § 16-50g et. seq. ("PUESA"), and Sections 16-50j-72(b) of the Regulations of Connecticut State Agencies adopted pursuant to the PUESA, AT&T Wireless PCS, LLC, by and through its agent AT&T Wireless PCS, Inc., ("AT&T Wireless") hereby notifies the Connecticut Siting Council of its intent to modify an existing facility located at 10 Redwood Lane, Avon, Connecticut (the "Redwood Lane Facility"), owned by SBA Towers Inc., ("SBA"). AT&T Wireless and SBA have agreed to share the use of the Redwood Lane Facility, as detailed below.

The Redwood Lane Facility

The Redwood Lane Facility consists of an approximately one hundred six (106) foot monopole (the "Tower") and associated equipment currently being used for wireless communications by VoiceStream, Sprint and the municipality. A chain link fence surrounds the Tower compound. The surrounding land uses are predominantly residential.

AT&T Wireless' Facility

As shown on the enclosed plans prepared by ScienTel, including a site plan and tower elevation of the Redwood Lane Facility, AT&T Wireless proposes shared use of the Facility by placing antennas on the Tower and equipment cabinets needed to provide he rachic, personal communications served.

AT&T Wireless will install 6 panel antennas at app.

Tower and associated equipment cabinets (2 proposed, 2 future, each 30" D) located on a concrete pad. As evidenced in the letter of structural intention prepared by ScienTel, annexed hereto as Exhibit A, AT&T has confined that use tower is structurally capable of supporting the addition of AT&T Wireless' antennas.

Redwood Lane Facility constitutes an exempt "modification" of an existing facility as defined in Connecticut General Statutes Section 16-50i(d) and Council regulations promulgated pursuant thereto. Addition of AT&T Wireless' antennas and equipment to the Tower will not result in an increase of the Tower's height nor extend the site boundaries. Further, there will be no increase in noise levels by six (6) decibels or more at the Tower site's boundary. As set forth in an Emissions Report prepared by Nader Soliman, Radio Frequency Engineer, annexed hereto as Exhibit B, the total radio

¹ VoiceStream and Sprint's antenna centerlines will be modified slightly but their platforms will remain at the same heights.

frequency electromagnetic radiation power density at the Tower site's boundary will not be increased to or above the standard adopted by the Connecticut Department of Environmental Protection as set forth in Section 22a-162 of the Connecticut General Statutes and MPE limits established by the Federal Communications Commission. For all the foregoing reasons, addition of AT&T Wireless' facility to the Tower constitutes an exempt modification which will not have a substantially adverse environmental effect.

Conclusion

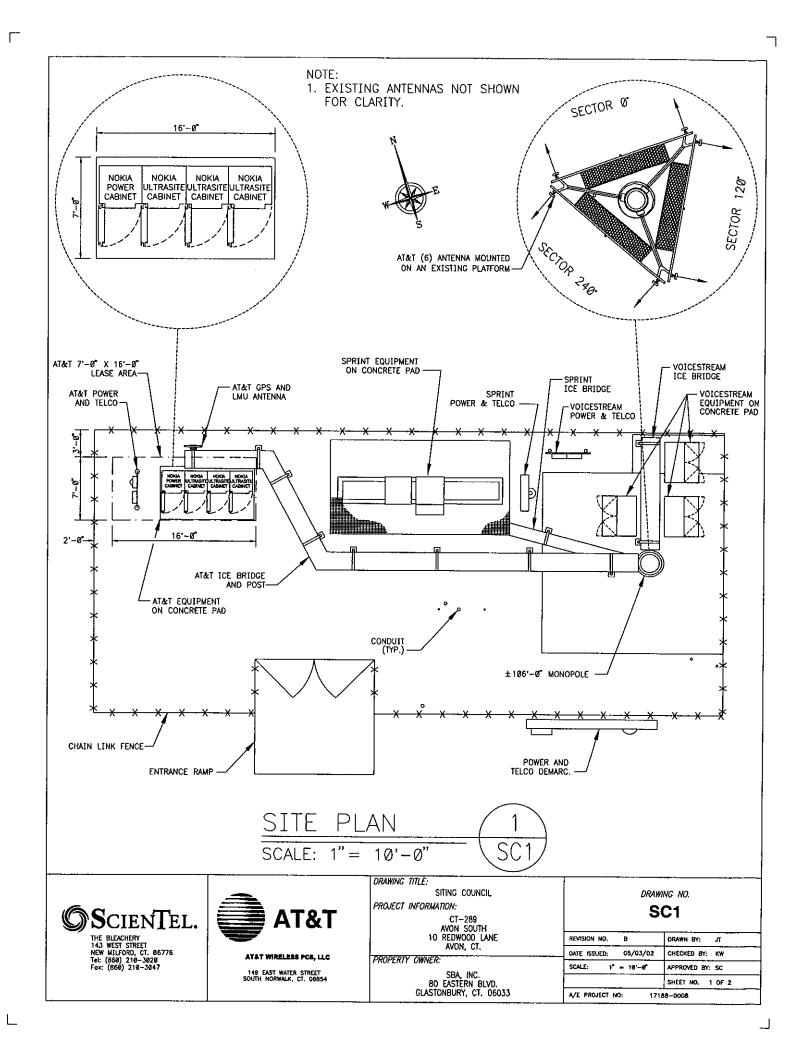
Accordingly, AT&T Wireless requests that the Connecticut Siting Council acknowledge that its proposed modification to the Redwood Lane Facility meets the Council's exemption criteria.

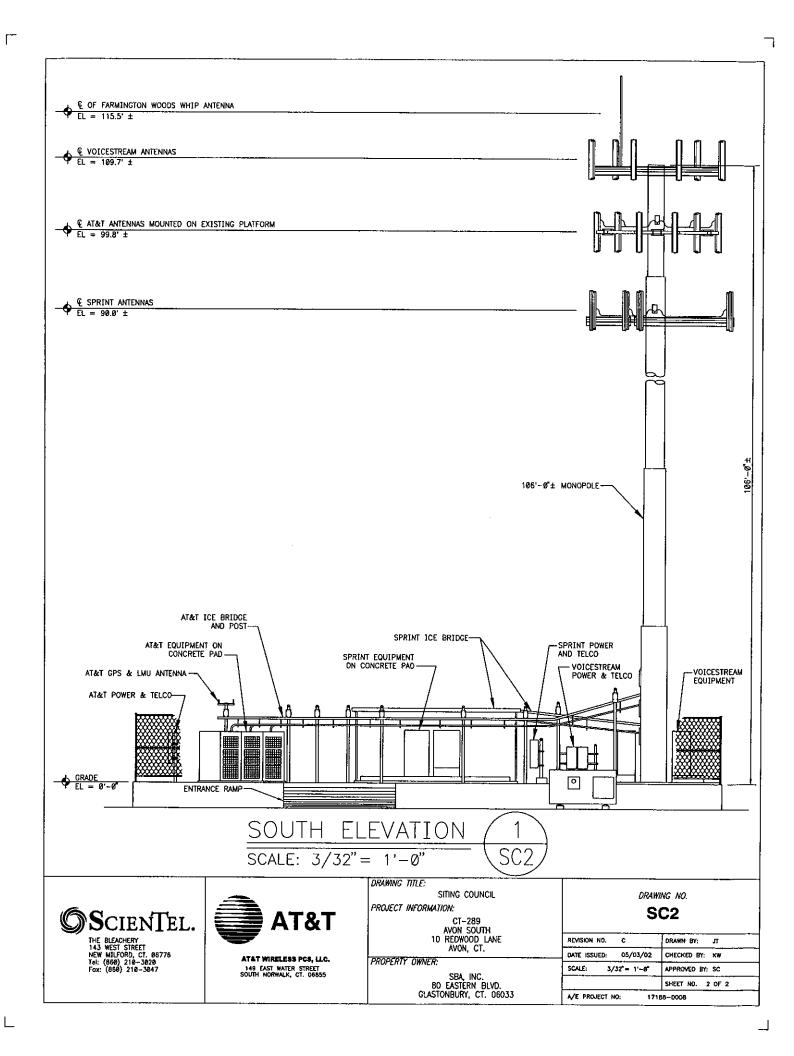
Respectfully Submitted,

Christopher B. Fisher, Esq. On behalf of AT&T Wireless

cc: Town Manager, Town of Avon

Harold Hewett, Bechtel Mark Roberts, SBA





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Exacility Constitutes An Exempt Modification

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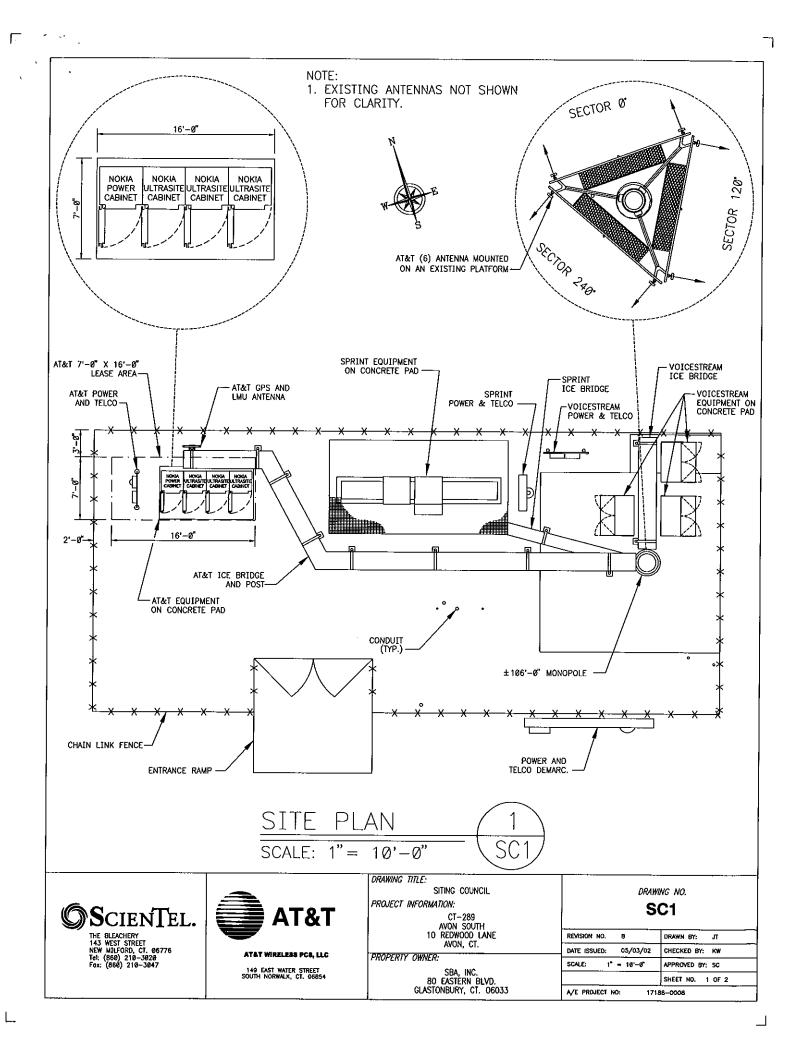
Conclusion

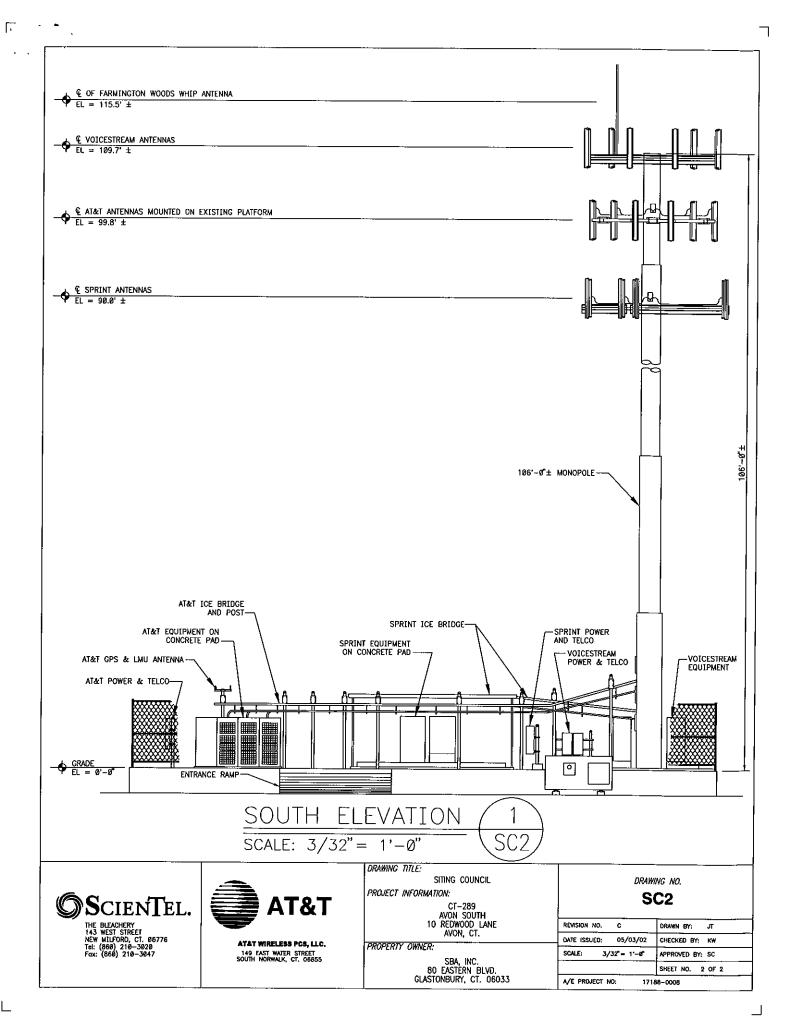
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Respectfully Submitted,

Christopher B. Fisher, Esq. On behalf of AT&T Wireless

cc: Town Manager, Town of Avon Harold Hewett, Bechtel Mark Roberts, SBA







Bechtel ID# <u>907-007-28</u>9

AWS ID#_____

May 6, 2002

Mr. Don Huntley
Bechtel Telecommunications
210 Pomeroy Avenue, Suite 201
Meriden, CT 06450

SCANNED

SUBJECT:

Site Name:

Street Address:

Avon South

10 Redwood Lane

Avon, CT 06001

AT & T Site Number:

Scientel Project Number:

CT-289 17188-0008

Dear Mr. Huntley:

The structural design calculations for the Avon site have been prepared by me and/or under my direct supervision and are in compliance with the governing Building Codes for these jurisdictions, and with accepted recognized engineering design principles.

This design provides for the installation of (6) antennas at a centerline height of 99.8' on the existing 106' PiRod MP60 monopole structure. The monopole structure was analyzed with the current antenna loadings at centerline heights of 109.7' and 90' and a whip antenna with a height to the bottom of the antenna of 104.65'.

Please feel free to call me if you have any further questions or comments. I can be reached directly at 630-652-3833.

Sincerely, Scientel, LLC

Kurt S. Wilson, P.E. Engineer

c: S. Cook – Scientel LLC,





RF Exposure Analysis for Proposed AT&T Wireless Antenna Facility

SITE ID: 900-007-289

May 1, 2002

Prepared by AT&T Wireless Services, Inc. Nader Soliman RF Engineer

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1. Introduction

This report constitutes an RF exposure analysis for the proposed AT&T Wireless antenna facility to be located at 10 Redwood Ln, Avon, CT 06001. This analysis uses site-specific engineering data to determine the predicted levels of radio frequency (RF) electromagnetic energy in the vicinity of the proposed facility and compares those levels with the Maximum Permissible Exposure (MPE) limits established by the Federal Communications Commission.

2. Site Data

Site Name: Avon South		
Number of simultaneously operating channels	<mark>16</mark>	
Type of antenna	Allgon 7250.03	
Power per channel (Watts ERP)	250.0 Watts	
Height of antenna (feet AGL)	99.80 feet	
Antenna Aperture Length	5 feet	

3. RF Exposure Prediction

The following equations established by the FCC, in conjunction with the site data, were used to determine the levels of RF electromagnetic energy present in the vicinity of the proposed facility¹:

$$PowerDensity = \frac{0.64 * N * EIRP(\theta)}{\pi * R^2} (mW/cm^2)$$
 Eq. 1-Far-field

Where, N= Number of channels, R= distance in cm from the RC (Radiation Center) of antenna, and $EIRP(\theta) =$ The isotropic power expressed in milliwatts in the direction of prediction point. This is the correct equation for antennas which have their gain expressed in dBi, which is the usual case for the PCS bands.

$$PowerDensity = \frac{P_{in} / ch * N * 10^{3}}{2 * \pi * R * h * \alpha / 360} (mW/cm^{2})$$
 Eq. 2-Near-field

Where P_{in}/ch = Input power to antenna terminals in watts/ch, R = distance to center of radiation, h = aperture height in meters, α = 3 dB beam-width of horizontal pattern.

¹ RF exposure is measured and predicted in terms of power density in units of milliwatts (mW), a thousandth of a watt, or microwatts (μ W), a millionth of a watt, per square centimeter (cm²). Data comparing predictive analysis with on site measurements has demonstrated that power density can be effectively predicted at given locations in the vicinity of a wireless antenna facility.

4. FCC Guidelines for Evaluating the Environmental Effects of RF Radiation

In 1985, the FCC established rules to regulate radio frequency (RF) exposure from FCC licensed antenna facilities. In 1996, the FCC updated these rules, which were further amended in August 1997 by a Second Memorandum Opinion and Order. These new rules represent a consensus of the federal agencies responsible for the protection of public health and the environment, including the Environmental Protection Agency (EPA), the Food and Drug Administration (FDA), the National Institute for Occupational Health and Safety (NIOSH), and the Occupational Safety and Health Administration (OSHA).

Under the laws that govern the delivery of wireless communications services in the United States, as amended by the Telecommunications Act of 1996, the FCC has exclusive jurisdiction over RF emissions from personal wireless antenna facilities, which include cellular, PCS, messaging and aviation sites. ² Pursuant to its authority under federal law, the FCC has established rules to regulate the safety of emissions from these facilities.

5. Comparison with Standards

Exhibit A shows the levels of RF electromagnetic energy as one moves away from the antenna facility. As shown in Exhibit A, the maximum power density is 0.001828 mW/cm² which occurs at 110 feet from the antenna facility. The chart in exhibit A also shows that the power density is only 0.000190 mW/cm² at a distance of 4 feet. Table 1 below shows the Maximum Permissible Exposure (MPE) limits established by the FCC. There are different MPE limits for public/uncontrolled and occupational/controlled environments.

Table 1: Maximum Permissible Exposure limits for RF radiation

Frequency	Public/Uncontrolled	Occupational/controlled	Maximum power density at Accessible location
Cellular	.580 mW/cm ²	2.9 mW/cm ²	0.001828 mW/cm ²
PCS	1 mW/cm ²	5 mW/cm ²	

The maximum power density at the proposed facility represents only 0.20% of the public MPE limit for PCS frequencies.

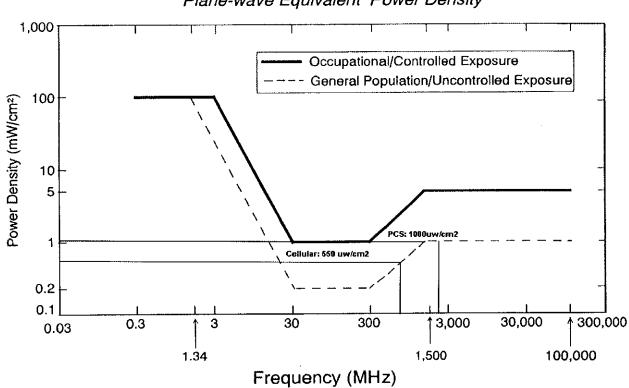
6. Conclusion

This analysis show that the maximum power density in accessible areas at this location is 0.001828 mW/cm², a level of RF energy that is well below the Maximum Permissible Exposure limit established by the FCC.

² 47 U.S. C. Section 332 (c) (7)(B)(iv) states that "[n]o State or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the Commission's regulations concerning such emissions."

7. FCC Limits for Maximum Permissible Exposure

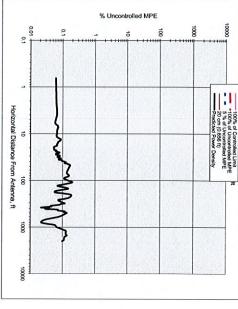
FCC Limits for Maximum Permissible Exposure (MPE) Plane-wave Equivalent Power Density

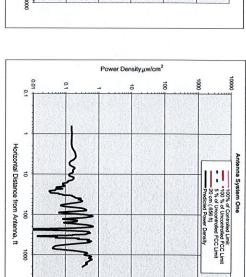


AT&T Wireless Services, Inc.

8. Exhibit A







1000

Antenna System Two

100% of Controlled Limit
100% of Uncontrolled FCC Limit
5 % of Uncontrolled FCC Limit
20 cm (£55 ft)
Predicted Power Density

Meets FCC Controlled Limits for The Antennas Systems. Number of Antenna Systems:

Meets FCC Uncontrolled Limits for The Antenna Systems.

Meets 5% of FCC Uncontrolled Limits for The Antenna Systems.

No Further Maximum Permissible Exposure (MPE) Analysis Required.

	50			
Composite Power (ERP) = 12,800.00 Watts	504.78 times lower than the MPE limit for uncontrolled environment	Maximum Power Density =		
12,800.00	uncontrolled (0.001828	mW/cm²	Pov
Watts	environment	0.20	% of limit	Power Density
		110.00	feet	@Horiz. Dist.

e Na	Site
. m	Ö
Avo	907
n Sout	7-00
th	7-28
	9

Site Location: 10 Redwood Ln, Avon, CT 06001

Date: 5/1/02

Performed By: Nader Soliman

Antenna System One

	units	Value
Frequency	MHz	1945
# of Channels	#	16
Max ERP/Ch	Watts	250
Max Pwr/Ch Into Ant.	Watts	5.86057204
(Center of	feet	99.8
Calculation Point	feet	0
or		0
roof surface)		0
No.		Allgon 7250.03
Max Ant Gain	dBd	16.3
Down tilt	degrees	0
Miscellaneous Att.	dB	0
Height of aperture	feet	5.11
Ant HBW	degrees	65
Distance to Ant _{bottom}	feet	97.245
WOS?	Y/N?	n

Ant System ONE Owner: AT&T Sector: 3 Azimuth: 0/120/240

Antenna System Two

0.1

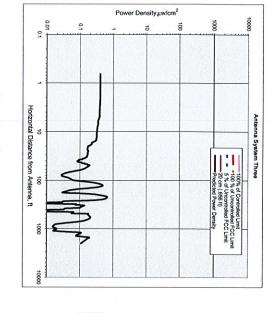
Horizontal Distance from Antenna, ft

1000

10000

Frequency	units	- 1 1
Frequency	MHz	
# of Channels	#	
Max ERP/Ch	Watts	
Pwr/Ch Into Ant.	Watts	_
(Center of	feet	_
Point	feet	
ground or		
roof surface)		_
No.		_
Max Ant Gain	dBd	-
Down tilt	degrees	-
Miscellaneous Att.	dB	-
Height of aperture	feet	
Ant HBW	degrees	_
Distance to Antbottom	feet	-
2SOM	Y/N?	_

Ant System TWO Owner: Voicestream Azimuth 0/120/240 Sector: 3



Power Density µw/cm²

1000

0

Antenna System Four

100% of Controlled Limit
100% of Uncontrolled FCC Limit
5 % of Uncontrolled FCC Limit
20 cm (856 ft)
Predicted Power Density

Antenna System Three

WOS7	Distance to Ant _{bottom}	Ant HBW	Height of aperture	Miscellaneous Att.	Down tilt	Max Ant Gain	Antenna Model No.	roof surface)	(above ground or	Calculation Point	(Center of Radiator)	Max Pwr/Ch Into Ant.	Max ERP/Ch	# of Channels	Frequency	
SN/A	feet	degrees	feet	dB	degrees	dBd				feet	feet	Watts	Watts	#	MHz	units
	87.5	65	5	0	0	15.1	DB980G90	0	0	0	90	7.725738581	250	16	1960	Value

Ant System Three Owner: Sprint PCS
Sector: 3
Azimuth 0/120/240

	units Value	Antenna System Four
--	-------------	---------------------

0.01 +

Horizontal Distance from Antenna, ft

1000

10000

0.1

0	Y/N?	WOS?
110.8	feet	Distance to Antbottom
360	degrees	Ant HBW
9.4	feet	Height of aperture
0	dB	Miscellaneous Att.
0	degrees	Down tilt
8.3	dBd	Max Ant Gain
DB411		Antenna Model No.
0		roof surface)
0		(above ground or
0	feet	Calculation Point
115.5	feet	(Center of Radiator)
59.16433553	Watts	Max Pwr/Ch Into Ant.
400	Watts	Max ERP/Ch
2	#	# of Channels
155	MHz	Frequency
Value	units	

Ant System Four Owner: Farmington Woods Master Assoc.
Sector: 1
Azimuth: 360

9. For Further Information

Additional information about the environmental impact of RF energy from personal wireless antenna facilities can be obtained from the Federal Communications Commission:

Dr. Robert Cleveland Federal Communications Commission Office of Engineering and Technology Washington, DC 20554

RF Safety Program: 202-418-2464 Internet address: rfsafety@fcc.gov

RF Safety Web Site: www.fcc.gov/oet/rfsafety

10. References

- [1] The Communications Act of 1934, as amended by the Telecommunications Act of 1996, 47 U.S.C. Section 332 (c)(7)(B)(iv).
- [2] Guidelines for Evaluating the Environmental Effects of Radio frequency Radiation, Notice of Proposed Rulemaking, ET Docket 93-62, 8 FCC Rcd 2849 (1993).
- [3] Guidelines for Evaluating the Environmental Effects of Radio frequency Radiation, Report and Order, ET Docket 93-62, FCC 96-326, adopted August 1, 1996. 61 Federal Register 41006 (1996).
- [4] Guidelines for Evaluating the Environmental Effects of Radio frequency Radiation, Second Memorandum Opinion and Order, ET Docket 93-62, adopted August 25, 1997.
- [5] Evaluating Compliance with FCC Guidelines for Human Exposure to Radio frequency Electromagnetic Fields, OET Bulletin 65, August, 1997.



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051 Phone: (860) 827-2935 Fax: (860) 827-2950 E-Mail: siting.council@po.state.ct.us Web Site: www.state.ct.us/csc/index.htm

May 22, 2002

Honorable Richard W. Hines Chairman Town Council Town of Avon 60 West Main Street Avon, CT 06001-3743

RE: EM-AT&T-004-020521 - AT&T Wireless notice of intent to modify an existing telecommunications facility located at 10 Redwood Lane, Avon, Connecticut.

Dear Mr. Hines:

The Connecticut Siting Council (Council) received this request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72.

The Council will consider this item at the next meeting scheduled for June 3, 2002, at 1:30 p.m. in Hearing Room One, Ten Franklin Square, New Britain, Connecticut.

Please call me or inform the Council if you have any questions or comments regarding this proposal.

Thank you for your cooperation and consideration.

Very thuly yours,

S. Derek Phelps

Executive Director

SDP/dsi

Enclosure: Notice of Intent

c: Steven V. Kushner, Town Planner, Town of Avon Philip K. Schenck, Jr., Town Manager, Town of Avon

Connecticut Siting Council



Approved by Council	File I.D. <u>FM- A 121-004-02</u> 033
Date Complete:	Address 10 Redwood Lane
Site visit required?	Avon
Chooklie	of for Evenent Madifications and Town Observe
CHECKIS	t for Exempt Modifications and Tower Sharing
	Tower Height Total Height Total Height Total Height
2. Proposed Carrier ATAT	<u> </u>
Number of antennas	Type Pane Height 99,8 Extension
Other proposed equipment	on tower:
Proposed size/location of e	quipment building/cabinets: 2 new, 2 future cals on conc pad 10/15
Proposed site clearing/grad	ling:
Fence line modification:	Va
Other proposed items:	
3. Current carriers: Vice Street	Am Height: 189.7 Power density %: 2.4 2.4
4. Power density calculation: Prop	osed carrier percentage: Cumulative percentage:
5. Town approval date (if necessar	y):Town application date (if necessary):
	ÀS NACS.
7. Coordinates Latitude:	<u> (1) - 46 - 21</u> Longitude: <u>72 - 52 - 48</u> Elevation:
8. Town(s) CEO notified of applicat	tion to Siting Council? CC Johnnar
Site Visit Information	Date of visit: 5/30/02
9. Description of site features, surro	ounding land uses, and sight lines:
Site on edge of fa	inway/tee in gated condodupmt, a nexto
Issues:	

Filing Documentation for Meeting
1.
2.
3.
4.



